

WE CLAIM:

- 1 1. A process for preparing a catalyst which
2 comprises:
 - 3 (a) preparing a paste comprising a uniform mixture
4 of
 - 5 (i) at least one alkaline earth metal
6 carbonate;
 - 7 (ii) a liquid medium;
 - 8 (iii) a silver bonding additive; and,
 - 9 (iv) at least one extrusion aid;
 - 10 (b) forming one or more shaped particles from said
11 paste;
 - 12 (c) drying and calcining said particles; and,
 - 13 (d) impregnating the dried and calcined particles
14 with a solution comprising a silver compound.
- 1 2. The process of claim 1, wherein the liquid
2 medium is aqueous; and the silver bonding additive is a
3 silver oxalate ethylene diamine complex.
- 1 3. The process of claim 1, wherein step (d)
2 comprises a process comprising:
 - 3 (i) impregnating the particles obtained in step
4 (c); and,
 - 5 (ii) drying the impregnated particles at a
6 temperature in the range of from 100 °C to 1000 °C
- 1 4. The process of claim 2 wherein the paste has a
2 weight ratio of silver calculated as metal to alkaline

3 earth metal carbonate of 1:5 to 1:100; the silver
4 solution has a concentration of silver of from 27% to 33%
5 by weight, and the temperatures for drying and calcining
6 are in the range of from 200 °C to 950 °C.

1 5. The process of claim 2 wherein the alkaline
2 earth metal carbonate comprises calcium carbonate; and,
3 the paste comprises a mixture of between 0.90 to 99 parts
4 by weight of calcium carbonate and between 35 to 45 parts
5 by weight aqueous silver oxalate-ethylenediamine solution
6 having a concentration of from 27% to 33% by weight of
7 the silver complex.

1 6. The process of claim 2 wherein the silver
2 oxalate ethylene diamine complex comprises an aqueous
3 solution, wherein said solution further comprises cesium
4 hydroxide.

1 7. The process of claim 1 wherein the alkaline
2 earth metal carbonate comprises calcium carbonate.

1 8. The process of claim 7 wherein the silver
2 bonding additive comprises an aqueous solution of a
3 silver oxalate ethylene diamine complex; the weight ratio
4 of silver to calcium carbonate in the catalyst is 1:9;
5 and, the shaped particles are formed via extrusion.

1 9. A process for preparing an olefin oxide
2 comprising reacting a gas composition comprising an
3 olefin and oxygen in the presence of the catalyst
4 composition obtained by the process comprising:

5 . (a) preparing a paste comprising a uniform mixture
6 of
7 (i) at least one alkaline earth metal
8 carbonate;
9 (ii) a liquid medium;
10 (iii) a silver bonding additive; and,
11 (iv) at least one extrusion aid;
12 (v) forming one or more shaped particles from
13 said paste;
14 (vi) drying and calcining said particles; and,
15 (vii) impregnating the dried and calcined
16 particles with a solution comprising a silver compound.

1 10. The process of claim 8 wherein the olefin is
2 propylene or ethylene.

1 11. The process of claim 8 wherein the gas
2 composition further comprises ethylchloride and/or NO_x.

1 12. The process of claim 8 wherein the olefin has a
2 concentration of at least 0.5% v, the concentration of
3 oxygen is at least 2%, and the ethylchloride
4 concentration is at least 0.1 ppm by volume.

1 13. The process of claim 8 wherein the process is
2 operated at a temperature in the range of from 150 °C to
3 320 °C, a pressure in the range of from 0.5 barg to 100
4 barg, and a Gas Hourly Space Velocity in the range of
5 from 100 Nl/l·h to 30,000 Nl/l·h.

1 14. The process of claim 12 wherein the olefin is
2 propylene or ethylene.

1 15. The process of claim 13 wherein the gas
2 composition further comprises ethylchloride and/or NO_x.

1 16. The process claim 14 wherein the olefin has a
2 concentration of at least 0.5% v, the concentration of
3 oxygen is at least 2%, and the ethylchloride
4 concentration is at least 0.1 ppm by volume.